Hecla
MINING COMPANY

M/021/004

December 29, 1993

Mr. Wayne Hedberg
Minerals Regulatory Program
Division of Oil, Gas, & Mining
3 Triad Center, Suite 350
355 W. North Temple
Salt Lake City, UT 84140-1203

RE: Escalante Tailings Impoundment Reclamation Plan

Dear Mr. Hedberg:

I would like to provide you with additional information regarding our proposed six-inch layer of screened waste rock for the Escalante tailings pond reclamation. You indicated that your staff was not comfortable with placing the six-inch layer over the tailings pond surface.

We had the surface of the pond surveyed on 100-foot centers in October, 1993 so we have the base information necessary to determine grades and volumes. Most of the surface is basically flat and amenable to placing a six-inch layer of material. There are some areas, in particular where the discharge pipes were located, that will have to be graded prior to waste rock placement. The areas that must be graded are minimal.

Grade stakes would be placed on 100-foot centers over the tailings surface to guide waste rock placement. We will have continuous survey control available on the project so we would be able to determine the thickness of waste rock at any point on the surface whenever necessary. The goal of the project would be to ensure we have a minimum material depth of six-inches at any point, although the thickness may be greater than six-inches at some locations. Work on the subsoil layer will not commence in any area prior to survey verification that the waste rock layer thickness is adequate. Subsoil material will be used to bring the surface up to grade for drainage.

I like 10" HLOS

The waste rock will be screened to provide a coarse fraction for the capillary barrier. A screen analysis of a composite sample gathered from the waste pile surface indicates that approximately 75% of the material is greater than 4 mesh (0.187 inches) in size. We would propose to screen the waste to 4 mesh or larger and use the oversize to cover the tailings. This size material will provide an excellent capillary barrier due to the high percentage of voids that can be expected in the placed material.

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One other modification I would like to propose is steepening the side slopes of the impoundment runoff ditch from 4H:1V to 3H:1V. The natural slopes on the south side of the impoundment are steeper than 4H:1V so the ditch excavation would require scalping the face of the hill all the way to the crest. I would propose that the side slopes be steeper and the ditch bottom widened from 8 feet to 9.5 feet to allow for the same flow capacity with one foot water depth. This change would significantly reduce the amount of surface disturbance required for the impoundment runoff ditch.

I am working on a final revision of our reclamation plan for the tailings impoundment so we can have a single document that specifies all that we intend to do. The revised plan will include the latest material thicknesses, the changes described in this letter, and the water monitoring requirements from our Consent Decree. The plan is complete except for the drawings so I should be able to send it to you next week.

If you have any further questions or concerns, please give me a call.

Sincerely yours,

Alan Wilson

Alan Wilson
Senior Reclamation Engineer

cc: G. Wilhelm